

WHAT IS CLAIMED IS:

1. A sensor device for a vehicle having a communication network and a plurality of electronic control units for vehicle controls, the sensor device comprising:

5 motion detecting means for detecting motions of a vehicle;
storage means capable of updating stored content and holds the stored content in case a power supply is interrupted;

updating means for updating the content stored in the storage means in a manner that results detected by the motion detecting means are stored in the storage means for a holding period;

10 collision detecting means for detecting a collision of the vehicle from acceleration exerted on the vehicle;

storage-holding means which, when the collision is detected by the collision detecting means, discontinues operation of the updating means and holds the content stored in the storage means; and

15 transmission means for transmitting the results detected by the motion detecting means and stored in the storage means,

20 wherein the storage means, the updating means, the collision detecting means and the storage-holding means are connected to the plurality of electronic control units through the communication network so that the results detected by the motion detecting means are transmitted to the electronic control units through the communication network.

25 2. A sensor device according to claim 1, wherein the storage-holding means discontinues the operation of the updating

means after a passage of a standby period set to be shorter than the holding period.

3. A sensor device according to claim 1, wherein the motion
5 detecting means includes at least one of a longitudinal G sensor for detecting acceleration exerted in a direction in which the vehicle is traveling, a lateral G sensor for detecting acceleration exerted in a direction of width of the vehicle and a yaw rate sensor for detecting acceleration about the turning axis of the vehicle.

10 4. A sensor device according to claim 1, further comprising:
receiving means for receiving operation data representing operating state of the vehicle through the communication network,
wherein the updating means updates the content stored in
15 the storage means in a manner that the results detected by the motion detecting means as well as the operation data received by the receiving means are stored in the storage means.

20 5. A sensor device according to claim 4, wherein the receiving means receives at least any one of operating states of an accelerator pedal, a steering wheel and a brake pedal as the operation data.